



ENVIRONMENTAL MANAGEMENT PLAN

1. INTRODUCTION

An Environmental Management Plan (EMP) is a site-specific management plan developed to ensure that the project is implemented and managed throughout its life in an environmentally sustainable manner. EMP also ensures that the project implementation is carried out in accordance with the design and the mitigate measures as recommended in the Environment Impact Assessment study to reduce the adverse impacts during the project's life cycle.

Adequate environment management measures need to be incorporated during the planning phase to minimize any adverse impact and assure sustainable development. This plan helps in formulations, implementation of environment protection measures suggested, and development and monitoring programme for environmental parameters during the operation phase of the project.

2. OBJECTIVE OF ENVIRONMENT MANAGEMENT PLAN

The objective of the Environmental Management Plan is summarized hereunder,

- To limit/reduce the degree, extent, magnitude or duration of adverse impacts.
- To treat all the pollutants i.e. liquid effluent, air emissions and hazardous waste with adoption of adequate and efficient technology.
- To comply with all regulations stipulated by the Ministry of Environment, Forest & Climate Change (MoEF&CC) /Pollution Control Board (PCB) regarding air emissions and liquid effluent discharge under various Act/Rules/Laws for prevention and control of pollution.
- To handle hazardous wastes as per The Hazardous and other wastes (Management, Handling and Transboundary Movement Rules) 2016 & Solid Waste Management Rules 2016.
- Continuous development and search for innovative technologies for a cleaner and better environment.
- To create good working condition for employees.
- To account for recycling and reusing measures, proposed or required to be adopted for minimization of consumption of resources and generation of pollutants.
- To reduce fire and accident hazards.
- To ensure the better and safe work environment through pre-meditated planning of prevention and control of hazards.

3. ENVIRONMENT MANAGEMENT SYSTEM & EHS POLICY

To implement and facilitate the Environment Management System for any project, one of the most important aspects is, support from the management. Unit will take care of its responsibilities



towards the Environment. Unit believes in sustainable development and is equally concerned about environment preservation and pollution control. Unit has prepared Environment, Health & Safety (EHS) Policy approved by its Director for effective and efficient working with view of environment protection. The EHS policy will be formulated to comply with statutory norm with regards to the Environment, Occupational Health & Safety and strive for the continuous improvement to prevent pollution, reduce wastages, conserve energy, reduced risk and health hazards. All employees at each cadre of the unit will be made aware about the EHS Policy of the company and policy will be posted at various prominent places in the unit. The employees to be recruited for the work will be made aware about the EHS policy during the induction training being imparted.

Environment management system and EHS Policy focuses on the following:

- Highlighting environment protection, minimizing health hazards and maximizing safety of all the personnel in the factory and surroundings.
- Focus on continual improvements in Health, Safety & Environment sectors by controlling the processes causing environmental impacts and health and safety hazards and setting and reviewing the objectives.
- Encouraging suppliers and contractors to adapt our environment, occupational health and safety policy principles.

4. ENVIRONMENT MANAGEMENT CELL

A separate Environmental Management Cell is to be set-up to undertake the monitoring of the environmental pollution level by measuring stack emissions, ambient air quality, wastewater quality, noise level etc., and development of greenbelt as per Environmental Management Plan. The organogram of Environmental Management Cell (EMC) is shown in Figure-1.

The major duties & responsibilities of EMC are as follows:

- To implement the Environmental Management Plan
- To ensure regular operation & maintenance of pollution control devices
- To initiate environmental monitoring as per approved schedule
- Collection of information through regular monitoring and create a database.
- Analysis of the data and decision for the critical areas for immediate attention and corrective actions.
- Ensure good housekeeping in the plant is maintained.
- Work out 'Action Plan' for implementation of the recommendations made under Environment Management Plan.
- Preparation of budget for environment management program and proper allocation of the funds for the same.



- To make continuous efforts for waste minimization.
- Maintaining log of employee's complaints and the action taken

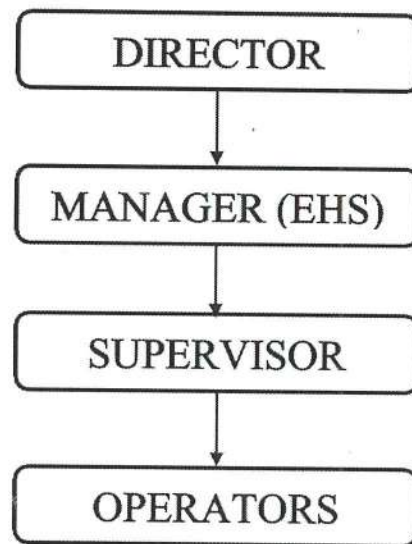


Figure-1: Organogram of the Environment Management cell

4.1 Reporting System of Non-Compliances/ Violations of Environmental Norms

Record keeping and reporting of performance is an important management tool for ensuring sustainable operation of the unit. Records are maintained for regulatory, monitoring and operational issues. Company will develop reporting systems of non-compliances/ violations of environmental norms to the Board of Directors.

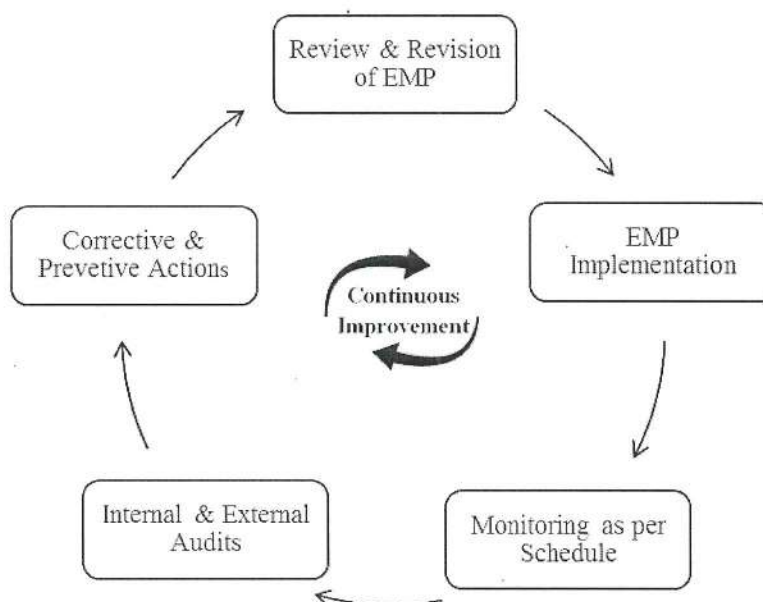
The mechanism is summarized below:

1. Identify deviation/non-compliance/violation of environmental norms as lay down in consent to operate and letter of Environmental clearance. Record to communication/complain received from plausible stake holder.
2. The EHS manager will identify deviation/non-compliance/violation from failure to comply with statutory requirements.
3. Respond from EHS manager within reasonable time limit to concern authorities with c/c mark to Technical head.
4. Technical head will take it in action and give necessary guideline to comply this deviation/non-compliance/violation of environmental norms. Parallel arrange budget for necessary action to comply the condition.
5. Communication received from the EHS manager will be discussed in technical management meeting.
6. Board discussion, Decision and Action
 - The chairperson will review the information available and take a decision depending on the seriousness of the violation.



- The decision will be taken to ensure the compliance of noncompliance/ violation of environmental norms and it's safeguarded. The decision will be taken by consensus and if no consensus is arrived at, voting will be conducted.
- Enlist measures that would undertake to ensure that deviations/ non-compliance/violations of Environmental norms and take care not to occur same violation in future.

4.2 Framework for Continual Improvement of Environmental Performance of Organization



5. ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan would specifically consist of the following and industry will follow the said plan physically as well as in spirit. Pollution control arrangements/mitigation measures for different types/ sources of pollution are presented below.

5.1 ENVIRONMENT MANAGEMENT PLAN FOR CONSTRUCTION PHASE

Environmental impacts during the construction phase can be attributed to the site preparation, excavation of trenches, erection & mechanical fabrication, construction activities, transportation etc. and provision of civic amenities to the construction workforce. The potential for environmental impact during construction phase on most of the environmental components are temporary and the environment returns back to its previous status on completion of the construction. State of the art technology will be adopted for control of pollution during project execution phase, whenever and wherever applicable.

All construction activities generally cause disruptions to the pre project environmental quality. The following environmental protection measures will be incorporated as part of terms and conditions of contract for implementation by the contractor or the authority as appropriate. Recommendations made to minimize impacts during construction phase are delineated below:



TABLE - 1: CONSTRUCTION PHASE ENVIRONMENT MANAGEMENT PLAN

Environmental Aspects/ Issues	Management Measures
Drainage & Flood Control	• Management will ensure that no construction materials like earth or stones are disposed such as to block the flow of any water course and cross drainage channels. • Contractor will take all necessary measures to prevent the blockage of water flow. Temporary or permanent flooding of the site or any adjacent area will be prevented.
Construction waste	• Management will ensure that any spoilages of material unsuitable for fill will not be disposed off near any water course, agricultural land, and natural habitat. • All waste materials will be completely disposed as per standard practices.
Water pollution	• The Management will take all precautionary measures to prevent the wastewater generated during construction from entering into streams or water bodies. • Contractor will arrange for collection, storing and disposal of oily wastes to the pre-identified disposal sites. All spills and collected petroleum products will be disposed off in accordance with MoEF&CC and CPCB guidelines. • The sewage system for the camp are designed, built and operated in such a way that no health hazards occurs and no pollution to the air, ground water or adjacent water courses take place
Air pollution	• The Management will take every precaution to reduce the level of dust from construction sites involving earthwork by sprinkling of water, encapsulation of dust source and by erection of screen/barriers. • Contractor will ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that pollution emissions levels comply with the relevant requirements. • The Contractor will submit PUC certificates for all vehicles/equipment/machinery used for the project.
Noise pollution	• All vehicles and equipment used in construction will be fitted with exhaust silencers. • Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced.
Waste Disposal	• The contractor will provide garbage bins in the camps and ensure that these are regularly emptied and disposed off in a hygienic manner as per the Solid Waste Management practices.
Safety	• Protective footwear and protective goggles to all workers employed on mixing asphalt materials, cement, concrete etc. • The Contractor will mark 'hard hat' and 'no smoking' and other 'high risk' areas and enforce non-compliance of use of PPEs with zero tolerance.



Environmental Aspects/ Issues	Management Measures
	• Adequate safety measures for workers during handling of materials at site will be taken up.

5.2 COMPLETION OF CONSTRUCTION ACTIVITY - RESTORATION

Before the activity is considered as complete by the authority, appropriate measures would be taken to restore the project site and surrounding areas to that of pre-construction condition. Temporary structures, equipment, surplus material and refuse would be removed from the project site at the earliest.

Land will be restored as discussed below:

- To be restore as good as pre-construction condition.
- Provision of proper drainage pattern.
- Construction debris and other wastes would be cleared from the site.
- Fences and other facilities will be repaired during this stage.

5.3 ENVIRONMENT MANAGEMENT PLAN FOR OPERATIONAL PHASE

The operational phase activities due to proposed project will have the potential to cause long term environmental impacts.

Several control measures have been incorporated to minimize the generation of wastes and subsequent environmental impacts during the operational phase. Strict adherence to these pollution prevention and control measures will moderate the environmental impacts to the minimum possible level during operational phase.

In general, the environmental management plan during operational phase of the plant will be directed to the following:

- It will be ensured that all the pollution control / environment management systems are installed before the commencement of operation of the project.
- Wherever possible, the control systems will be interlinked with the operational units, so that failure of the control system will shut down the respective operational unit.
- Regular performance evaluation of the control systems will be undertaken to ensure their optimum performance.
- Preventive maintenance schedule of the control systems will be matching with that of the respective operational unit.
- Regular monitoring for various components of environment will be undertaken to ensure effective functioning of pollution control measures as well as to safe guard against any unforeseen changes in environment.

During the operational phase, there will not be any significant impacts on various environmental components. Hence, the Management Plan mentioned in Table-2 is recommended to mitigate adverse impacts during operation phase:



TABLE - 2: OPERATIONAL PHASE ENVIRONMENT MANAGEMENT PLAN

Environmental Aspects/ Issues	Mitigation/ Control Measures	Operating procedural Measures	Impact Evaluation
1. Air Environment			
• Flue gas emission from boilers.	• Stack height Flue gas & process gas shall be installed as per CPCB guideline to achieve proper dispersion of gaseous emission to minimize impacts on Ground Level Concentration (GLC). • For flue gas stack, following will be installed as APCM, FGCS (Flue Gas Conditioning System) & ESP to mainly control the emission of particulate matter, Nox & So2. • A preventive and maintenance schedule shall be implemented for all APCMs and a vigilant check shall be kept on their efficiency & consistent operation.	• Efficient functioning of the boilers will be ensured as per the operating procedure of suppliers/ designers. • Regular periodic monitoring will be done as per suggested EMP to satisfy the conditions of CC&A to ensure compliance as well as the efficiency of APC system. • Written instructions related to the procedures / guidelines to be followed for start-up, shutdown and maintenance etc., will be developed and provided to responsible persons.	Effective APCM for flue gas and process gas emission will be proposed. Hence, there will be no any significant impact due to the gaseous emission



Environmental Aspects/ Issues	Mitigation/ Control Measures	Operating procedural Measures	Impact Evaluation
2. Water Environment			
- Source of fresh water will be from borewell - Total Domestic Effluent generation will be 8 KLD - Hence, total effluent generation will be 2200 KLD only.	- Sewage shall be disposed off through septic tank via soak pit system. - Out of total 3830 KLD water requirements, Industrial 500 KLD water will be recycled and reused. Hence Total 3330 (3830-500) KLD of Fresh water will be required after proposed project. - Industrial wastewater will be treated in ETP.	- Regular preventive maintenance of the installed facilities will ensure optimum use of water with least possible wastage. - Records of water usage will be maintained through log sheets. - Proper sanitation facilities with septic tank, soak pit system will be maintained. - Periodical analysis of raw water will be done. - Transfer pumps and conveyance pipelines will be monitored & kept in proper working conditions through periodic maintenance to prevent spillages/ leakages.	The final treated effluent conforming to prescribed limits shall be discharge in to KALI RIVER. Hence, there will not be any significant impact on the quality of water resources in the study area.
3. Solid/Hazardous Waste Management			
Hazardous waste generation, handling and management	The wastes shall be collected, segregated and disposed as per Hazardous and Other wastes (Management & Transboundary Movement) Rules,	Transfer pumps and conveyance pipelines will be monitored & kept in proper working conditions through periodic maintenance to prevent spillages/	The wastes shall be handled as per Hazardous and Other wastes (Management & Transboundary Movement)



Environmental Aspects/ Issues	Mitigation/ Control Measures	Operating procedural Measures	Impact Evaluation
	2016. Municipal waste collection bins will be placed at strategic locations in the plant. Used lubricating waste oil and oil contaminated cloths etc. will be collected separately in containers and shall be sold to authorized recyclers as per CPCB guidelines.	leakages.	Rules, 2016. Hence, there will not be any significant impact because of solid/ Hazardous waste disposal.

4. Noise Environment

Noise generation is anticipated during transportation, material handling and plant operation.	Noise generating and vibrating equipment's like motors & pumps, will be properly aligned and mounted on foundations with adequate rubber padding and suitable acoustic barriers to control the noise generation due to vibrations.	- Transfer pumps and other machineries will be kept in proper working conditions through periodic maintenance. - All personnel working in high noise generating areas will be provided with ear protecting devices.	Through implementation of proper mitigation measures, the impact of noise & vibration can be limited and/or mitigated.
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Environmental Aspects/ Issues	Mitigation/ Control Measures	Operating procedural Measures	Impact Evaluation
	enclosure as per CPCB guidelines. Monitoring of noise will be carried out as per monitoring plan.		

5. Biological Environment

This is an expansion project on the existing as well as proposed plot area. So, there will be additional land coverage. Also, the prevalent green belt area of proposed & existing area will be maintained	General guidelines given by CPCB such as the unit has developed and maintained a green belt plantation within the premises, including Miyawaki Plantation and is taking necessary measures to achieve and maintain the prescribed minimum 33% green cover in accordance with the applicable UPPCB guidelines.	- Utmost care will be taken to maintain the health of the plants / trees. - Effective efforts will be in place to increase the plant-survival rate. Such efforts will include use of watering fertilizers, pesticides, proper plant-mix etc.	There will be no significant adverse impact on the biological environment due to this expansion.
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Environmental Aspects/ Issues	Mitigation/ Control Measures	Operating procedural Measures	Impact Evaluation
6. Occupational Health & Safety			
There will be risk to health and safety of the personnel employed by virtue of the project. Major health and safety issues encountered are physical hazards, respiratory hazards, electrical hazards, noise, fire & explosion hazards associated while working within different departments of manufacturing plant.	• Infrastructural requirements associated with plant safety, like safety automation systems, ventilation systems, proper work platforms, approach ladders, etc. must be provided. • Shield guards or guard railings shall be installed at all belts, pulleys, gears and other moving parts. • Conveyors and similar machinery shall be provided with a means for stopping them at any point. Elevated platforms & walkways, and stairways & ramps shall be equipped with handrails, toe-boards and non-slip surfaces. Electrical equipment shall be grounded, well insulated and conform to applicable codes.	• Personnel involved in process and material handling will be duly trained w.r.t the hazards associated with the operations and chemicals. • Requisite PPE's will be provided and their use will be ensured by the company management. • Good housekeeping, proper illumination & ventilation will be maintained within the plant. • Pre-employment and regular periodic medical check-ups will be done for the plant employees. • Proper supervision will be maintained during operations to ensure proper & safe working/ operating conditions.	Adoption of proper safety precautions and training sessions for plant personnel will help to mitigate the risks to health and safety.

5.4 DETAILED DESCRIPTION OF ENVIRONMENTAL ASPECTS

5.4.1 Water Environment

Water requirement will meet through ground water. However, record of water consumption should be maintained.

1. Construction Phase

Drinking water and sanitation facilities at the project site shall be available to the construction work force. This is necessary to reduce pollution of any receiving water body and also to prevent hazards due to water borne vectors.



2. Operation Phase

- Total fresh water requirement will be 3330 KLD (Required 3830 KLD – 500 KLD Recycled). The quantity of industrial effluent from manufacturing process & Domestic wastewater (sewage) generation shall be 8 KLD.
- 8 KLD domestic effluent shall be disposed of through septic tank via soak pit system.
- 2200 KLD process industrial effluent will be treated in proposed primary ETP via high COD stream followed by Biological of secondary & tertiary. With proper handling biological process HRT, MLSS, F/M, Adequate DO.
- Proper housekeeping should be adopted to prevent spillages and contaminated surface runoff going to storm water drains.
- Following measures would be taken to minimize the water usage in the operational phase:
 - Endeavor to reduce the actual process water consumption by way of improvement in operation of processing units.
 - Water saving by shower head flow controls, spray taps and faucet aerators and photosensitive taps.

3. Plans for Management, Collection and Disposal of Waste Streams to be generated from Spillage, Leakages, Vessel Washing, Used Container Washing etc.

- Proper housekeeping will be adopted to prevent spillages and contaminated surface runoff going to storm water drains.
- Our unit has no uses any hazardous chemicals in the process.
- Company should make continuous efforts in waste minimization.
- For the equipment and pipelines, leakage detection and repair will be scheduled to minimize pollution.
- Second wash of plant / equipment will be re-used as first wash in the same equipment / reactor to reduce fresh water consumption.
- Adequate spares for effluent collection and disposal system will be maintained.

4. Storm Water Management

The plant has a proper rainwater drainage and rainwater harvesting system. During the seasonal rainfall period, the rainwater generated within the plant premises is collected through the designated rainwater drainage system and routed to the rainwater harvesting/recharge system. Thus, the rainwater is properly collected and utilized for groundwater recharge, and no rainwater is allowed to mix with the industrial effluent.



5.4.2 Management of Solid/Hazardous Waste

1. Construction Phase

Construction activities can lead to solid waste generation including, plastic, paper, wood, metal, glass, waste concrete, excavated soil, broken bricks, waste plaster, metallic scrap etc. This will be segregated into biodegradable and non- biodegradable.

Non-biodegradable will be handed over to authorized vendor. No trash or debris from construction activities would be left at project site after construction is completed. The construction debris as well as debris generated due to demolition will include Concrete; Brick bat debris will be further used for leveling of low lying areas or in preparation of sub-surfaces for roads or pavements.

2. Operational Phase

S.No.	Type of Waste	Category of Hazardous Waste as per the Schedule I, II and III of these rules	Mode of Disposal
1	Used Spent Oil	5.1 Schedule-I	TSDF/Authorised Recycler
4	Empty Barrels/containers/liners/contaminated chemicals/wastes	33.1 Schedule-I	TSDF/Authorised Recycler
5	Contaminated Cotton Rugs or other cleaning material Cotton Gloves	33.2 Schedule-I	TSDF/Authorised Recycler



3. Storage of Hazardous Waste:

Hazardous waste shall not be stored for a period more than 90 days. And shall maintain records and make them available for inspection.

Store at a designated Onsite-secured area with impervious floor that affords protection from sun & rain fall, spreading of leachate, mixing of wastes etc.

4. Transportation of Hazardous Waste:

Properly packed & labeled waste transport through dedicated vehicle to a captive facility/ authorized TSDF facility.

3. Methodology of De-Contamination and Disposal of Discarded Containers

The proper disposal of empty chemical containers is more important for hazardous chemicals as it can contain residual amounts of chemicals. There can be no more than 1 inch of material left in the container not more than 3% by weight of the container's capacity. In an effort to ensure that this residue is handled properly and to be able to recycle or properly dispose of these containers, the following procedure is to be followed. The below guidelines are useful for non-hazardous chemicals also.

Rinse Procedure: An empty chemical container that contains hazardous chemicals (liquid or solid), must be rinsed 3 times with water (or appropriate rinsing agent) before being discarded. The first rinse should be collected as chemical waste, it can be put into any waste container of compatible chemicals, the second & third rinses can then go down to drain. If the chemical is on the list of acutely hazardous waste, then all three rinses must be collected.

After the containers are rinsed, they can be discarded appropriately as described below. All caps should be let off of the discarded containers. Containers should be labeled with "Empty" labels and the chemical name should be crossed or blacked out prior to being discarded. Caps may be discarded to regular trash. Finally, it is disposed of by sell it to authorized decontamination facility / recycler or reuse.



5.4.3 Noise Environment

The sound pressure level generated by a noise source decreases with increasing distance from the source due to wave divergence. The propagation and attenuation of noise pressure wave is dependent on many parameters amongst which, the medium of travel and the ambient conditions are the most significant parameters. In order to minimize adverse impact on the noise environment, due attention shall be given for implementing noise control measures. Comprehensive measures shall be taken at design stage for noise from proposed unit. The measures are as under:

- The noise level at the plant boundary shall be restricted to 75 dB (A) during day time and 70 dB (A) during night time.
- Noise level shall be specified for various rotating equipment as per Occupational Safety and Health Association (OSHA) standards.
- Equipment lay-out shall be done considering segregation of high noise generating sources.
- Erection of suitable enclosure, if required, to minimize the impact of high noise generating sources
- There may be small addition to the ambient noise level, due to the increased transportation activities. This creates a slight adverse impact on the sound environment.
- Regular oiling, lubrication and maintenance of the equipment shall be carried out to minimize noise generation.

1. Construction Phase

The construction labor would be provided with noise protection devices like ear muffs and occupational safety ware, as per requirement. And noise generating equipment shall be stopped during night hours.

2. Operation Phase

Following measures shall be adopted for abatement of noise during operation phase:

- Acoustic laggings, enclosures and silencers shall be provided wherever necessary for high noise generating equipment.
- Sound proof glass paneling shall be provided for all operating stations / control rooms as well as for shift rooms at critical places.
- Strict implementation/ compliance of all statutory norms w.r.t. noise generation, occupational exposure shall be done.
- Use of personal protective devices such as ear-muffs and ear-plugs shall be strictly enforced.
- Noise generating sources in the plant areas shall be monitored regularly. Monitoring of ambient noise levels should also be carried out regularly.
- High noise generating machines and processes required for proposed project will be enclosed and insulated.
- Insulation of ventilation pipes and use of dampers will be made at all possible places.
- Preventive maintenance schedule will be followed for all instruments and machinery to maintain good working condition.
- Enclosures and barriers will be provided to pumps and machineries producing high noise levels, required for proposed project.
- Workers exposed to high noise generating operations will be provided with suitable ear protection devices.



5.4.4 Biological Environment

- No trash/non-biodegradable materials will be dumped outside the project site.
- Domestic wastewater (sewage) sent to septic tank/soak pit. No contaminated water will be allowed to enter the surrounding environment or surface water body.
- Green belt will be developed all along the boundary of the installation by choosing fast growing and resistant varieties suitable to the soil conditions in the site (native plants) and special care will be taken to maintain it.
- Survival rate of the planted trees will be closely monitored in the green belt and the trees which could not survive should be counted.
- There will be a waste management plan developed for categorization and handling of wastes.

6. MEASURES FOR IMPROVEMENT OF ECOLOGY

There are no Wild life sanctuaries, Bird sanctuaries, National Parks within 30 Km radius of the plant. No significant vegetation occurs in and around the project site. No significant fauna exists in the area. Hence there will not be any adverse impact on flora & fauna due to the proposed project.

7. GREEN BELT DEVELOPMENT

Greenbelts are an effective mode of control of air pollution, where green plants form a surface capable of absorbing air pollutants and forming a sink of pollutants. Leaves with their vast area in a tree crown, absorb pollutants on their surface, thus effectively reduce pollutant concentration in the ambient air. Often the adsorbed pollutants are incorporated in the metabolic pathway and the air is purified. Plants grown to function as pollution sink are collectively referred as greenbelts.

8. RESOURCE CONSERVATION AND CLEANER PRODUCTION

The cleaner production is a way or a tool to have sustainable development with initiative to have growth minimum disturbance to environment and human being. The approach to cleaner production is different from conventional method of end of pipe treatment.

Cleaner production approach is directly reduction at source. Steps that are undertaken by the industry are given below:

- Proper air to fuel ratio will be maintained for the maximum efficiency of boiler. Good insulation practice will be adopted to prevent heat losses.
- In our manufacturing process reactants will be used as far as possible a near to molar ratio in order to avoid use of excess chemicals, which in turn will minimize the organic load in the effluent.
- Mechanical seals will be provided to the process vessels having agitator for reduction of fugitive emissions and leakages.
- Housekeeping will be regularly maintained. Dedicated staff for the purpose will be employed.



9. ENERGY CONSERVATION PROGRAMME

Energy conservation measures are often the easiest, quickest and cheapest way to reduce costs and be environmentally pro-active. The conservation efforts would consist of the following:

- Ensure proper selection fuel-firing equipment's.
- Feed-water composition will be checked is as concentrated as possible. The quantity of water evaporated is the main factor affecting energy consumption. Up-steam adjustments may give a higher feed concentration and result in lower energy use.
- Gravity flow shall be preferred wherever possible to save pumping energy
- Schedule process operations to avoid fluctuations in boiler loads
- Routine cleaning and maintenance programmes for the combustion system will improve efficiency and reduce energy costs.
- Keep the heat transfer surfaces clean by preventing excessive scale formation
- Maximize the use of natural lighting through design
- LED lights are used in administration building and plant premises
- Constant monitoring of energy consumption and defining targets for energy conservation
- Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels.

10. SKILLED AND TRAINED MANPOWER

Employment would be as per prevailing norms of state government for skilled and trained people for the proposed project.

11. SOCIAL WELFARE & UPLIFTMENT ACTIVITIES

Proposed expansion project will increase direct/indirect employment opportunity for surrounding area local residents. Industry is also committed to make contribution to other social/cultural activities to be conducted in the area. Industry is committed to participate in various developmental activities including community welfare programme for overall improvement of the socio-economic environment in the project area through its effective Corporate Environment Responsibility (CER) / Enterprise Social Commitment (ESC) programme.

This unit will set aside approximately 2.0% of the project cost for such activities. Once the project commences, these funds will be utilized across various areas.

